



2004 California Physical Fitness Testing

**Report to the Governor
and the Legislature**

prepared by the
California Department of Education

December 2004



Introduction

In spring 2004, physical fitness testing was conducted in California public schools in grades five, seven, and nine. The test used for physical fitness testing is the *FITNESSGRAM*®, designated for this purpose by the State Board of Education. This report summarizes results of the 2004 test administration and provides a summary comparison with the results from 2002 and 2003.

Background

Assembly Bill (AB) 265, signed into law in October 1995 (California *Education Code* Title 2, Chapter 6, Section 60800) states:

...during the month of March, April, or May, the governing board of each school district maintaining any of grades five, seven and nine shall administer to each pupil in those grades the physical performance test designated by the State Board of Education.

In February 1996, the State Board of Education designated the *FITNESSGRAM*® as the required physical performance test to be administered to California students.

Senate Bill (SB) 896, approved in 1998, further required the California Department of Education (CDE) to report results to the Governor and the Legislature. Section 60800 of the California *Education Code* was amended in January 2003 to allow the month of February to be added to the existing months of March, April, and May for the administration of the physical fitness test.

All students in the specified grades are expected to take the physical fitness test, regardless of whether or not they are in a physical education class. Students who are physically unable to take the entire physical fitness test are to be given as much of the test as conditions permit. Students with Individualized Education Program or Section 504 Plans are provided accommodations as outlined in their plans.

Description of Test

The *FITNESSGRAM*® was developed by The Cooper Institute in Dallas, Texas, and endorsed by the American Alliance for Health, Physical Education, Recreation, and Dance. The primary goal of the *FITNESSGRAM*® is to assist students in establishing physical activity as part of their daily lives. Because of this goal, *FITNESSGRAM*® provides a number of options for most of the fitness areas so that all students, including those with special needs, have the maximum opportunity to participate in the tests.

Physical fitness consists of three components: 1) aerobic capacity; 2) body composition; and 3) muscular strength, endurance, and flexibility. To ensure thorough measurements



of all three components, the *FITNESSGRAM*® test comprises six major fitness areas with multiple performance task options for most of them:

Aerobic Capacity

- PACER
- One-Mile Run
- Walk Test (only for ages thirteen or older)

Body Composition

- Skinfold Measurements
- Body Mass Index

Abdominal Strength and Endurance

- Curl-Up

Trunk Extensor Strength and Flexibility

- Trunk Lift

Upper Body Strength and Endurance

- Push-Up
- Pull-Up
- Modified Pull-Up
- Flexed-Arm Hang

Flexibility

- Back-Saver Sit and Reach
- Shoulder Stretch

To complete the *FITNESSGRAM*®, students are required to participate in the following:

- One of the options from aerobic capacity
- One of the options from body composition
- The curl-up test
- The trunk lift test
- One of the options from upper body strength and endurance
- One of the options from flexibility

The following is a brief description of the six fitness areas of the *FITNESSGRAM*® and the performance task options.

Aerobic Capacity

This is perhaps the most important indicator of physical fitness and assesses the capacity of the cardiorespiratory system by measuring endurance.

PACER (Progressive Aerobic Cardiovascular Endurance Run). This is a multi-stage fitness test set to music, which provides a valid and fun alternative to the customary distance run. The objective is to run as long as possible back and forth across a 20-meter distance at a specified pace that gets faster each minute.

One-Mile Run. The objective of this test is to walk and/or run a distance of one mile at the fastest pace possible.

Walk Test. The objective of this test is to walk a distance of one mile as quickly as possible while maintaining a constant walking pace for the entire distance. This test is for students who are 13 years or older. The score is calculated using a formula that combines the walk time (in minutes and seconds) and the heart rate taken at the end of the walk.



Body Composition

Body composition results provide an estimate of the percent of a student's weight that is fat in contrast to the "fat-free" body mass that comes from muscles, bones, and organs.

Skinfold Measurements. Measurements of the thickness of the skinfold on the back of the upper right arm and the inside of the right calf are taken using a device called a skinfold caliper. A formula is used to calculate the percentage of body fat using these measurements.

Body Mass Index. This test provides an indication of a student's weight relative to his or her height. Height and weight measures are inserted into a formula to calculate the body mass index.

Abdominal Strength and Endurance

Abdominal strength and endurance are important in promoting good posture and correct pelvic alignment. The strength and endurance of the abdominal muscles are important in maintaining lower back health.

Curl-Up. The objective of this test is to complete as many curl-ups as possible up to a maximum of 75 at a specified pace.

Trunk Extensor Strength and Flexibility

This test is related to lower back health and vertebral alignment.

Trunk Lift. The goal of this test is to lift the upper body a maximum of 12 inches off the floor using the muscles of the back and to hold the position long enough to allow for the measurement of the lift distance.

Upper Body Strength and Endurance

This test measures the strength and endurance of the upper body. This is important to maintain functional health and to promote good posture. Four options are available to test for upper body strength and endurance.

Push-Up. The target for this test is to complete as many push-ups as possible at a specified pace.

Pull-Up. The objective of this test is to correctly complete as many pull-ups as possible.

Modified Pull-Up. The goal of this test is to successfully complete as many modified pull-ups as possible. The modified pull-up is different from a pull-up in that a student performs the test by lying on his or her back directly under a bar and grasping the bar to pull up until the chin reaches a specified level.



Flexed-Arm Hang. The objective of this test is to hang by the arms with the chin above a bar as long as possible.

Flexibility

This test measures joint flexibility, which is important to functional health.

Back-Saver Sit and Reach. The goal of this task is to assess the flexibility of the lower back and posterior thigh. Using a special box with a ruler attached and beginning in a sitting position with one leg extended and the other leg bent, the student extends forward to reach as far as possible on top of the box, to a maximum of 12 inches. After measuring one side, the student switches the position of the legs and reaches again. The distance reached is measured for both sides of the body.

Shoulder Stretch. This is a simple test of upper body flexibility. The student should be able to touch the fingertips together behind the back by reaching over both the right and left shoulder and under the elbow.

The Standards

The *FITNESSGRAM*® uses criterion-referenced standards to evaluate fitness performance. These standards were established by The Cooper Institute to represent a level of fitness that offers some degree of protection against diseases resulting from physical inactivity. Findings from current research, expert opinions, and theoretical perspectives have been used as the basis for establishing the *FITNESSGRAM*® standards. The *FITNESSGRAM*® standards have been established according to gender and age.

Performance levels for each of the *FITNESSGRAM*® tests are classified as (1) “in the Healthy Fitness Zone (HFZ)” or (2) “needs improvement.” Appendix A provides the standards for the HFZ for each test. All students should strive to achieve a score within the HFZ for each test. It is possible that some students score above the HFZ. These scores are included with those of students who score within the HFZ. For the purpose of this report, scores are reported as the percentage of students meeting the standard (“% in HFZ”) or not meeting the standard (“% not in HFZ”).

Data Collection and Reporting

Statewide data collection in 2004 was done electronically. School districts submitted their data to the CDE by June 30, 2004, through the Internet, by diskette or CD-ROM, or via e-mail.



Physical fitness test results for 2004 are reported by school, school district, county, and the state on the CDE Web site at <http://www.cde.ca.gov/ta/tg/pfl>. These reports are available by gender and race/ethnicity. No individual student data are reported on the CDE Web site.

Participation in 2004 Testing

Tables 1 through 22, which begin on page 8, provide a comprehensive summary of the results from the spring 2004 physical fitness test. In 2004, the physical fitness test was taken by 96 percent of all fifth grade students, 92 percent of all seventh grade students, and 78 percent of all ninth grade students. A total of 1,348,420 California students took part in the physical fitness test. Tables 1 and 2 present the gender and racial/ethnic composition of the student population participating in physical fitness testing.

Results of 2004 Testing

Table 3 contains the summary of test results by fitness area for all students. One column lists the percentage of students in the Healthy Fitness Zone (HFZ); another column lists the percentage not in the HFZ. Students not in the HFZ are those that did not attain the minimum fitness level for that area. As summarized below, this table shows that a notable percentage of students met the minimum fitness level for each area.

- Aerobic Capacity: 50-59 percent of students across all grades
- Body Composition: 67-68 percent of students across all grades
- Abdominal Strength: 81-84 percent of students across all grades
- Trunk Extensor Strength: 83-89 percent of students across all grades
- Upper Body Strength: 67-68 percent of students across all grades
- Flexibility: 66-72 percent of students across all grades

Table 4 reports the results by the number of fitness standards achieved by all students. Achievement of a fitness standard is based upon a test score falling in the HFZ for that fitness area. The fitness standard (HFZ) represents the minimal level of satisfactory achievement on the task for a fitness area (e.g., aerobic capacity, flexibility, etc.). It is desirable for students to achieve the HFZ, or performance standard, for all six areas of the physical fitness test.

The information in this table reveals that most of the students tested did not meet all six fitness standards. Twenty-five percent of the students in grade five, 29 percent in grade seven, and 26 percent in grade nine met all six fitness standards. These results indicate that improvements in performance are needed before the desired fitness levels are achieved.

Tables 5 and 7 display the physical fitness test results by gender. In grades five and



seven, the results indicate that higher percentages of females than males were in the HFZ for aerobic capacity, body composition, trunk extensor strength, and flexibility. Conversely, higher percentages of males than females achieved the HFZ for abdominal strength and upper body strength. In grade nine, however, the data revealed a different pattern. The percentages of females in the HFZ exceeded that of males for body composition, abdominal strength, trunk extensor strength, and flexibility. This gender pattern was reversed for aerobic capacity and upper body strength.

Although no ethnic subgroup exhibited high levels of fitness, subgroup results displayed in Tables 9 through 22 reveal some performance differences among the ethnicities. Asian/Asian American and White (not of Hispanic origin) subgroups had the highest percentages of students who achieved the HFZ for all six fitness areas. Hispanic/Latino and African/African American subgroups had the lowest percentages of students achieving this goal. The difference between the subgroups who had the highest and lowest percentage of students who met the HFZ for all fitness areas is 14.9 in grade five, 18.1 in grade seven, and 16.7 in grade nine.

Comparison of 2002-04 Participation and Physical Fitness Test Results

Tables 23 through 28 display 2004 physical fitness test results compared to those of 2003 and 2002. Results for the 2004 tests are reported for 1,348,420 students. This is an increase of 25,362 from 2003 and 82,874 from 2002. Higher levels of participation may be attributed to:

- Continued efforts and improvements in communication about the physical fitness test requirement, administration guidelines, and reporting procedures
- Increased training opportunities and consistent use of the *FITNESSGRAM*® resulting in greater familiarity with the *FITNESSGRAM*® administration procedures
- Ease and availability of multiple options for reporting the results to the CDE
- Greater efforts to improve physical education programs and health-related physical fitness due to the growing concerns about obesity in young and adolescent children
- Rising student enrollments in grades five, seven, and nine (Source: California Basic Educational Data System)
- Inclusion of the physical fitness test results on the School Accountability Report Cards (SARCs).

Tables 23 and 24 show a trend of continued growth in the percentages of students in all three grades who achieved the HFZ in all six physical fitness areas, with the largest



gains observed at grade nine. Moreover, across all grade levels, there was a three-year increase, ranging from 2.6 to 3.6 percent, in the percentages of students who met all six fitness standards. Across all grade levels there was a three-year trend of decreases, ranging from 2.2 to 3.2 percent, in the percentages of students who achieved zero of six fitness standards. A review of three years of data in Tables 26 and 28 revealed that females have made greater gains than males in the percentages achieving all six fitness standards.

In summary, the results indicate that there were small, but continuing, positive changes across the 2002, 2003, and 2004 physical fitness testing data. This suggests that statewide efforts to improve physical education programs and knowledge about health-related physical fitness are making a difference. Nevertheless, significant percentages of California students are not achieving the goal of attaining the HFZ for all six fitness areas.

Summary and Implications for California Students

Five years of available data show that the majority of California students at all three grade levels are not meeting the standards for the fitness areas of the *FITNESSGRAM*®. Although the most recent three years of data indicate that there is approximately a three to four percent increase in the number of students achieving the HFZ for all six fitness areas, there is still much work to do to ensure high levels of fitness for all students in California. The results suggest that both males and females and students from all ethnic backgrounds could benefit from a greater emphasis on all areas of physical fitness, especially aerobic capacity, body composition, upper body strength, and flexibility. School districts and schools are encouraged to use the data they receive from this test to examine their physical education programs. This data also can inform plans and strategies to improve physical education instruction and the physical activity opportunities offered to students during and outside of the regular school day.

This is only the fifth time in 15 years that quality data about the fitness of California's youth have been reported. Full and complete public access to summary data is available at <http://www.cde.ca.gov/ta/tg/pf>. This site provides reports for the state and every county, school district, and school. Administrators, teachers, parents, and guardians have the opportunity to examine the data to get a more complete picture of the yearly fitness levels of their students and children. Schools and parents also have the opportunity to work together in using this information to make important changes to physical education programs and family lifestyles. Such collaboration is key to effectively increasing the health-related physical fitness of their students and children.

A 2002 analysis conducted by the CDE of academic achievement and the physical fitness of California's public school students provides evidence of a positive relationship between physical fitness and academic achievement. In California and across the nation, additional research is currently being conducted to examine the direction and strength of this relationship.



2004 California Physical Fitness Test Data Tables

Table 1: Participation by Gender

Gender	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
Females	230,860	48.9	227,312	49.1	201,569	48.8
Males	241,307	51.1	235,462	50.9	211,802	51.2
No Gender Information	33	0.0	37	0.0	38	0.0

Table 2: Participation by Race/Ethnicity

Race/Ethnicity	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
African/African American	37,866	8.0	37,300	8.1	32,734	7.9
American Indian/Alaskan Native	4,092	0.9	4,283	0.9	3,700	0.9
Asian/Asian American	37,431	7.9	37,740	8.2	35,858	8.7
Filipino/Filipino American	11,707	2.5	11,865	2.6	11,677	2.8
Hispanic/Latino	224,857	47.6	209,576	45.3	177,590	43.0
Pacific Islander	3,508	0.7	3,512	0.8	3,308	0.8
White – Not of Hispanic Origin	144,268	30.6	151,424	32.7	141,294	34.2
No Response	8,471	1.8	7,111	1.5	7,248	1.8

**Table 3: Summary of Test Results by Fitness Area – All Students**

Physical Fitness Area	Grade 5			Grade 7			Grade 9		
	Total Tested**	% In HFZ*	% Not In HFZ	Total Tested	% In HFZ*	% Not In HFZ	Total Tested	% In HFZ*	% Not In HFZ
Aerobic Capacity	472,200	58.5	41.5	462,811	59.2	40.8	413,409	49.7	50.3
Body Composition	472,200	67.5	32.5	462,811	67.1	32.9	413,409	67.1	32.9
Abdominal Strength	472,200	80.8	19.2	462,811	83.5	16.5	413,409	80.7	19.3
Trunk Extensor Strength	472,200	87.0	13.0	462,811	88.8	11.2	413,409	83.0	17.0
Upper Body Strength	472,200	66.5	33.5	462,811	67.7	32.3	413,409	67.5	32.5
Flexibility	472,200	66.4	33.6	462,811	72.3	27.7	413,409	69.1	30.9

Table 4: Summary of Test Results by Number of Fitness Standards Achieved – All Students

Number of Fitness Standards Achieved	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
6 of 6	116,874	24.8	134,680	29.1	108,633	26.3
5 of 6	123,906	26.2	121,505	26.3	106,929	25.9
4 of 6	98,754	20.9	88,794	19.2	78,401	19.0
3 of 6	67,914	14.4	59,684	12.9	50,914	12.3
2 of 6	38,956	8.2	32,897	7.1	28,442	6.9
1 of 6	17,361	3.7	14,483	3.1	14,739	3.6
0 of 6	8,435	1.8	10,768	2.3	25,351	6.1
Total Tested:	472,200	100.0	462,811	100.0	413,409	100.0

* HFZ = Healthy Fitness Zone

** Total Tested = Number of students tested, including partially tested students.

**Table 5: Summary of Test Results by Fitness Area – Females**

Physical Fitness Area	Grade 5			Grade 7			Grade 9		
	Total Tested**	% In HFZ*	% Not In HFZ	Total Tested	% In HFZ*	% Not In HFZ	Total Tested	% In HFZ*	% Not In HFZ
Aerobic Capacity	230,860	59.8	40.2	227,312	61.2	38.8	201,569	46.1	53.9
Body Composition	230,860	76.4	23.6	227,312	73.1	26.9	201,569	69.3	30.7
Abdominal Strength	230,860	80.2	19.8	227,312	83.0	17.0	201,569	80.8	19.2
Trunk Extensor Strength	230,860	87.7	12.3	227,312	89.6	10.4	201,569	84.1	15.9
Upper Body Strength	230,860	63.0	37.0	227,312	66.1	33.9	201,569	66.2	33.8
Flexibility	230,860	69.8	30.2	227,312	75.8	24.2	201,569	70.5	29.5

Table 6: Summary of Test Results by Number of Fitness Standards Achieved – Females

Number of Fitness Standards Achieved	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
6 of 6	61,542	26.7	71,088	31.3	51,028	25.3
5 of 6	62,520	27.1	61,050	26.9	52,854	26.2
4 of 6	48,039	20.8	43,113	19.0	40,103	19.9
3 of 6	31,258	13.5	27,313	12.0	25,145	12.5
2 of 6	16,784	7.3	14,076	6.2	13,600	6.7
1 of 6	7,252	3.1	6,019	2.6	6,885	3.4
0 of 6	3,465	1.5	4,653	2.0	11,954	5.9
Total Tested:	230,860	100.0	227,312	100.0	201,569	100.0

*HFZ = Healthy Fitness Zone

**Total Tested = Number of students tested, including partially tested students.

**Table 7: Summary of Test Results by Fitness Area – Males**

Physical Fitness Area	Grade 5			Grade 7			Grade 9		
	Total Tested**	% In HFZ*	% Not In HFZ	Total Tested	% In HFZ*	% Not In HFZ	Total Tested	% In HFZ*	% Not In HFZ
Aerobic Capacity	241,307	57.3	42.7	235,462	57.2	42.8	211,802	53.2	46.8
Body Composition	241,307	58.9	41.4	235,462	61.3	38.7	211,802	65.0	35.0
Abdominal Strength	241,307	81.4	18.6	235,462	84.0	16.0	211,802	80.6	19.4
Trunk Extensor Strength	241,307	86.4	13.6	235,462	88.1	11.9	211,802	81.9	18.1
Upper Body Strength	241,307	69.9	30.1	235,462	69.2	30.8	211,802	68.7	31.3
Flexibility	241,307	63.2	36.8	235,462	69.0	31.0	211,802	67.9	32.1

Table 8: Summary of Test Results by Number of Fitness Standards Achieved – Males

Number of Fitness Standards Achieved	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
6 of 6	55,332	22.9	63,592	27.0	57,605	27.2
5 of 6	61,386	25.4	60,455	25.7	54,075	25.5
4 of 6	50,715	21.0	45,681	19.4	38,298	18.1
3 of 6	36,656	15.2	32,371	13.7	25,769	12.2
2 of 6	22,172	9.2	18,821	8.0	14,842	7.0
1 of 6	10,109	4.2	8,464	3.6	7,854	3.7
0 of 6	4,937	2.0	6,078	2.6	13,359	6.3
Total Tested:	241,307	100.0	235,462	100.0	211,802	100.0

* HFZ = Healthy Fitness Zone

** Total Tested = Number of students tested, including partially tested students.

**Table 9: Summary of Test Results by Fitness Area – African/African American**

Physical Fitness Area	Grade 5			Grade 7			Grade 9		
	Total Tested**	% In HFZ*	% Not In HFZ	Total Tested	% In HFZ*	% Not In HFZ	Total Tested	% In HFZ*	% Not In HFZ
Aerobic Capacity	36,737	51.6	48.4	35,873	48.5	51.5	30,615	40.7	59.3
Body Composition	36,726	67.6	32.4	36,058	63.7	36.3	30,865	61.0	39.0
Abdominal Strength	37,049	80.4	19.6	36,180	78.7	21.3	31,199	74.0	26.0
Trunk Extensor Strength	36,677	83.2	16.8	36,122	83.7	16.3	30,993	77.0	23.0
Upper Body Strength	36,661	69.6	30.4	35,953	65.9	34.1	30,631	63.1	36.9
Flexibility	36,764	66.3	33.7	36,209	67.8	32.2	30,916	63.1	36.9

Table 10: Summary of Test Results by Number of Fitness Standards Achieved – African/African American

Number of Fitness Standards Achieved	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
6 of 6	8,221	21.7	8,321	22.3	6,283	19.2
5 of 6	10,254	27.1	9,356	25.1	7,752	23.7
4 of 6	8,437	22.3	7,773	20.8	6,633	20.3
3 of 6	5,618	14.8	5,494	14.7	4,651	14.2
2 of 6	2,987	7.9	3,239	8.7	2,791	8.5
1 of 6	1,391	3.7	1,576	4.2	1,526	4.7
0 of 6	958	2.5	1,541	4.1	3,098	9.5
Total Tested:	37,866	100.0	37,300	100.0	32,734	100.0

*HFZ = Healthy Fitness Zone

**Total Tested = Number of students tested, including partially tested students.

**Table 11: Summary of Test Results by Fitness Area – American Indian/Alaskan Native**

Physical Fitness Area	Grade 5			Grade 7			Grade 9		
	Total Tested**	% In HFZ*	% Not In HFZ	Total Tested	% In HFZ*	% Not In HFZ	Total Tested	% In HFZ*	% Not In HFZ
Aerobic Capacity	3,952	53.9	46.1	4,120	52.8	47.2	3,445	46.1	53.9
Body Composition	3,965	64.9	35.1	4,156	62.9	37.1	3,519	61.6	38.4
Abdominal Strength	3,976	80.3	19.7	4,162	82.0	18.0	3,536	78.8	21.2
Trunk Extensor Strength	3,965	87.5	12.5	4,159	89.0	11.0	3,512	82.8	17.2
Upper Body Strength	3,934	64.5	35.5	4,113	65.0	35.0	3,475	64.2	35.8
Flexibility	3,928	63.6	36.4	4,106	70.1	29.9	3,473	65.1	34.9

Table 12: Summary of Test Results by Number of Fitness Standards Achieved – American Indian/Alaskan Native

Number of Fitness Standards Achieved	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
6 of 6	930	22.7	1,063	24.8	869	23.5
5 of 6	1,046	25.6	1,100	25.7	880	23.8
4 of 6	863	21.1	879	20.5	711	19.2
3 of 6	574	14.0	602	14.1	502	13.6
2 of 6	405	9.9	346	8.1	321	8.7
1 of 6	176	4.3	175	4.1	139	3.8
0 of 6	98	2.4	118	2.8	278	7.5
Total tested:	4,092	100.0	4,283	100.0	3,700	100.0

*HFZ = Healthy Fitness Zone

**Total Tested = Number of students tested, including partially tested students.

**Table 13: Summary of Test Results by Fitness Area – Asian/Asian American**

Physical Fitness Area	Grade 5			Grade 7			Grade 9		
	Total Tested**	% In HFZ*	% Not In HFZ	Total Tested	% In HFZ*	% Not In HFZ	Total Tested	% In HFZ*	% Not In HFZ
Aerobic Capacity	36,836	62.5	37.5	37,205	69.0	31.0	34,620	59.7	40.3
Body Composition	36,738	77.2	22.8	37,125	79.2	20.8	34,705	79.5	20.5
Abdominal Strength	36,880	84.0	16.0	37,261	88.6	11.4	35,017	87.3	12.7
Trunk Extensor Strength	36,862	88.1	11.9	37,166	90.9	9.1	34,965	87.5	12.5
Upper Body Strength	36,616	71.5	28.5	36,960	76.2	23.8	34,519	77.4	22.6
Flexibility	36,623	75.7	24.3	36,868	81.0	19.0	34,583	78.2	21.8

Table 14: Summary of Test Results by Number of Fitness Standards Achieved – Asian/Asian American

Number of Fitness Standards Achieved	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
6 of 6	11,551	30.9	15,244	40.4	12,887	35.9
5 of 6	10,954	29.3	10,704	28.4	10,724	29.9
4 of 6	7,536	20.1	6,241	16.5	6,262	17.5
3 of 6	4,282	11.4	3,263	8.6	3,101	8.6
2 of 6	2,011	5.4	1,365	3.6	1,297	3.6
1 of 6	755	2.0	516	1.4	526	1.5
0 of 6	342	0.9	407	1.1	1,061	3.0
Total Tested:	37,431	100.0	37,740	100.0	35,858	100.0

*HFZ = Healthy Fitness Zone

**Total Tested = Number of students tested, including partially tested students.

**Table 15: Summary of Test Results by Fitness Area – Filipino/Filipino American**

Physical Fitness Area	Grade 5			Grade 7			Grade 9		
	Total Tested**	% In HFZ*	% Not In HFZ	Total Tested	% In HFZ*	% Not In HFZ	Total Tested	% In HFZ*	% Not In HFZ
Aerobic Capacity	11,517	57.1	42.9	11,708	64.2	35.8	11,342	54.0	46.0
Body Composition	11,496	70.5	29.5	11,682	72.5	27.5	11,348	73.1	26.9
Abdominal Strength	11,531	83.4	16.6	11,727	87.9	12.1	11,366	85.6	14.4
Trunk Extensor Strength	11,437	86.7	13.3	11,696	90.5	9.5	11,369	87.5	12.5
Upper Body Strength	11,426	71.3	28.7	11,648	76.1	23.9	11,314	76.4	23.6
Flexibility	11,420	72.9	27.1	11,611	79.7	20.3	11,316	76.2	23.8

Table 16: Summary of Test Results by Number of Fitness Standards Achieved – Filipino/Filipino American

Number of Fitness Standards Achieved	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
6 of 6	3,170	27.1	4,216	35.5	3,576	30.6
5 of 6	3,233	27.6	3,372	28.4	3,441	29.5
4 of 6	2,475	21.1	2,194	18.5	2,227	19.1
3 of 6	1,565	13.4	1,235	10.4	1,315	11.3
2 of 6	829	7.1	525	4.4	551	4.7
1 of 6	295	2.5	190	1.6	246	2.1
0 of 6	140	1.2	133	1.1	321	2.7
Total Tested:	11,707	100.0	11,865	100.0	11,677	100.0

*HFZ = Healthy Fitness Zone

**Total Tested = Number of students tested, including partially tested students.

**Table 17: Summary of Test Results by Fitness Area – Hispanic/Latino**

Physical Fitness Area	Grade 5			Grade 7			Grade 9		
	Total Tested**	% In HFZ*	% Not In HFZ	Total Tested	% In HFZ*	% Not In HFZ	Total Tested	% In HFZ*	% Not In HFZ
Aerobic Capacity	220,518	55.1	44.9	205,045	54.5	45.5	169,583	42.9	57.1
Body Composition	219,990	60.4	39.6	204,683	59.8	40.2	169,748	59.6	40.4
Abdominal Strength	220,590	77.1	22.9	205,427	80.1	19.9	171,390	75.2	24.8
Trunk Extensor Strength	220,144	85.8	14.2	205,205	87.4	12.6	170,052	79.0	21.0
Upper Body Strength	219,416	61.0	39.0	203,453	62.4	37.6	168,298	61.3	38.7
Flexibility	220,021	61.6	38.4	204,999	68.7	31.3	169,947	64.2	35.8

Table 18: Summary of Test Results by Number of Fitness Standards Achieved – Hispanic/Latino

Number of Fitness Standards Achieved	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
6 of 6	41,649	18.5	47,310	22.6	35,020	19.7
5 of 6	55,326	24.6	52,166	24.9	41,418	23.3
4 of 6	50,624	22.5	44,065	21.0	35,623	20.1
3 of 6	38,294	17.0	32,447	15.5	26,002	14.6
2 of 6	23,526	10.5	19,173	9.1	16,055	9.0
1 of 6	10,818	4.8	8,704	4.2	8,862	5.0
0 of 6	4,620	2.1	5,711	2.7	14,610	8.2
Total Tested:	224,857	100.0	209,576	100.0	177,590	100.0

*HFZ = Healthy Fitness Zone

**Total Tested = Number of students tested, including partially tested students.

**Table 19: Summary of Test Results by Fitness Area – Pacific Islander**

Physical Fitness Area	Grade 5			Grade 7			Grade 9		
	Total Tested**	% In HFZ*	% Not In HFZ	Total Tested	% In HFZ*	% Not In HFZ	Total Tested	% In HFZ*	% Not In HFZ
Aerobic Capacity	3,439	56.2	43.8	3,437	59.8	40.2	3,157	50.1	49.9
Body Composition	3,416	59.1	40.9	3,429	60.3	39.7	3,179	60.2	39.8
Abdominal Strength	3,452	83.0	17.0	3,445	85.9	14.1	3,180	82.9	17.1
Trunk Extensor Strength	3,424	88.6	11.4	3,419	89.5	10.5	3,180	83.7	16.3
Upper Body Strength	3,405	69.9	30.1	3,409	71.7	28.3	3,157	70.7	29.3
Flexibility	3,441	69.8	30.2	3,462	76.3	23.7	3,190	73.3	26.7

Table 20: Summary of Test Results by Number of Fitness Standards Achieved – Pacific Islander

Number of Fitness Standards Achieved	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
6 of 6	907	25.9	1,061	30.2	928	28.1
5 of 6	870	24.8	939	26.7	799	24.2
4 of 6	716	20.4	654	18.6	615	18.6
3 of 6	525	15.0	433	12.3	435	13.1
2 of 6	310	8.8	242	6.9	239	7.2
1 of 6	119	3.4	115	3.3	114	3.4
0 of 6	61	1.7	68	1.9	178	5.4
Total Tested:	3,508	100.0	3,512	100.0	3,308	100.0

*HFZ = Healthy Fitness Zone

**Total Tested = Number of students tested, including partially tested students.

**Table 21: Summary of Test Results by Fitness Area – White (Not of Hispanic Origin)**

Physical Fitness Area	Grade 5			Grade 7			Grade 9		
	Total Tested**	% In HFZ*	% Not In HFZ	Total Tested	% In HFZ*	% Not In HFZ	Total Tested	% In HFZ*	% Not In HFZ
Aerobic Capacity	140,806	64.8	35.2	147,452	65.6	34.4	134,799	57.6	42.4
Body Composition	140,750	76.0	24.0	148,039	74.7	25.3	136,295	74.7	25.3
Abdominal Strength	141,578	85.5	14.5	148,234	87.8	12.2	136,747	87.0	13.0
Trunk Extensor Strength	141,127	89.6	10.4	148,296	91.6	8.4	136,463	87.9	12.1
Upper Body Strength	140,566	72.5	27.5	147,031	72.7	27.3	135,008	73.0	27.0
Flexibility	141,147	70.9	29.1	148,503	75.8	24.2	136,891	74.1	25.9

Table 22: Summary of Test Results by Number of Fitness Standards Achieved – White (Not of Hispanic Origin)

Number of Fitness Standards Achieved	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
6 of 6	48,158	33.4	55,378	36.6	47,224	33.4
5 of 6	39,939	27.7	41,888	27.7	40,044	28.3
4 of 6	26,484	18.4	25,699	17.0	24,999	17.7
3 of 6	15,965	11.1	15,428	10.2	14,012	9.9
2 of 6	8,259	5.7	7,615	5.0	6,689	4.7
1 of 6	3,518	2.4	3,006	2.0	3,043	2.2
0 of 6	1,945	1.3	2,410	1.6	5,283	3.7
Total Tested:	144,268	100.0	151,424	100.0	141,294	100.0

*HFZ = Healthy Fitness Zone

**Total Tested = Number of students tested, including partially tested students.

**Table 23: 2002-04 Comparison of Test Results by Fitness Area – All Students**

Physical Fitness Area	Grade 5			Grade 7			Grade 9		
	% in HFZ*			% in HFZ*			% in HFZ*		
	2002	2003	2004	2002	2003	2004	2002	2003	2004
Aerobic Capacity	56.5	56.4	58.5	57.4	58.5	59.2	47.5	48.9	49.7
Body Composition	65.9	65.0	67.5	66.3	65.6	67.1	64.7	65.4	67.1
Abdominal Strength	78.1	79.5	80.8	80.7	82.7	83.5	77.7	79.3	80.7
Trunk Extensor Strength	84.1	85.6	87.0	86.4	87.8	88.8	79.7	81.8	83.0
Upper Body Strength	62.5	64.9	66.5	62.2	66.4	67.7	61.1	65.5	67.5
Flexibility	63.7	65.0	66.4	69.3	70.7	72.3	65.5	67.8	69.1

Table 24: 2002-04 Comparison of Test Results by Number of Fitness Standards Achieved – All Students

Number of Fitness Standards Achieved	Grade 5			Grade 7			Grade 9		
	% of Students			% of Students			% of Students		
	2002	2003	2004	2002	2003	2004	2002	2003	2004
6 of 6	22.2	23.0	24.8	25.9	27.1	29.1	22.7	24.1	26.3
5 of 6	25.6	26.1	26.2	26.2	26.6	26.3	25.2	25.9	25.9
4 of 6	21.1	21.0	20.9	19.7	19.7	19.2	19.5	19.6	19.0
3 of 6	14.7	14.5	14.4	13.1	13.2	12.9	12.9	12.8	12.3
2 of 6	8.5	8.3	8.2	7.3	7.3	7.1	7.0	7.1	6.9
1 of 6	3.8	3.7	3.7	3.2	3.2	3.1	3.5	3.6	3.6
0 of 6	4.1	3.3	1.8	4.5	2.9	2.3	9.3	6.9	6.1

*HFZ = Healthy Fitness Zone

**Table 25: 2002-04 Comparison of Test Results by Fitness Area – Females**

Physical Fitness Area	Grade 5			Grade 7			Grade 9		
	% in HFZ*			% in HFZ*			% in HFZ*		
	2002	2003	2004	2002	2003	2004	2002	2003	2004
Aerobic Capacity	57.5	57.1	59.8	59.1	60.2	61.2	43.4	44.8	46.1
Body Composition	74.8	73.5	76.4	72.2	71.3	73.1	66.6	66.9	69.3
Abdominal Strength	78.1	78.8	80.2	80.9	82.2	83.0	78.1	79.4	80.8
Trunk Extensor Strength	85.2	86.3	87.7	87.8	88.8	89.6	81.3	83.0	84.1
Upper Body Strength	59.0	61.1	63.0	60.3	64.3	66.1	60.0	64.2	66.2
Flexibility	66.8	68.2	69.8	73.0	74.5	75.8	66.4	69.0	70.5

Table 26: 2002-04 Comparison of Test Results by Number of Fitness Standards Achieved – Females

Number of Fitness Standards Achieved	Grade 5			Grade 7			Grade 9		
	% of Students			% of Students			% of Students		
	2002	2003	2004	2002	2003	2004	2002	2003	2004
6 of 6	23.4	24.5	26.7	27.3	28.8	31.3	21.0	22.4	25.3
5 of 6	26.5	26.9	27.1	27.0	27.3	26.9	25.6	26.4	26.2
4 of 6	21.7	21.0	20.8	20.0	19.7	19.0	20.9	20.9	19.9
3 of 6	14.3	13.7	13.5	12.7	12.5	12.0	13.5	13.3	12.5
2 of 6	7.9	7.5	7.3	6.7	6.5	6.2	7.0	7.1	6.7
1 of 6	3.5	3.3	3.1	2.8	2.7	2.6	3.5	3.4	3.4
0 of 6	2.8	3.1	1.5	3.4	2.5	2.0	8.5	6.5	5.9

*HFZ = Healthy Fitness Zone

**Table 27: 2002-04 Comparison of Test Results by Fitness Area – Males**

Physical Fitness Area	Grade 5			Grade 7			Grade 9		
	% in HFZ*			% in HFZ*			% in HFZ*		
	2002	2003	2004	2002	2003	2004	2002	2003	2004
Aerobic Capacity	56.6	55.8	57.3	56.9	56.9	57.2	52.1	52.8	53.2
Body Composition	58.3	57.0	58.9	61.8	60.2	61.3	63.8	64.1	65.0
Abdominal Strength	79.6	80.2	81.4	81.9	83.3	84.0	78.5	79.3	80.6
Trunk Extensor Strength	84.5	85.0	86.4	86.6	86.8	88.1	79.4	80.7	81.9
Upper Body Strength	67.0	68.7	69.9	65.0	68.6	69.2	63.0	66.9	68.7
Flexibility	61.8	62.0	63.2	66.9	67.2	69.0	65.6	66.6	67.9

Table 28: 2002-04 Comparison of Test Results by Number of Fitness Standards Achieved – Males

Number of Fitness Standards Achieved	Grade 5			Grade 7			Grade 9		
	% of Students			% of Students			% of Students		
	2002	2003	2004	2002	2003	2004	2002	2003	2004
6 of 6	21.5	21.7	22.9	25.0	25.5	27.0	24.6	25.7	27.2
5 of 6	25.2	25.4	25.4	25.8	26.0	25.7	25.2	25.5	25.5
4 of 6	21.0	21.0	21.0	19.7	19.7	19.4	18.5	18.5	18.1
3 of 6	15.3	15.2	15.2	13.7	13.9	13.7	12.4	12.4	12.2
2 of 6	9.2	9.0	9.2	8.1	8.1	8.0	7.0	7.1	7.0
1 of 6	4.2	4.2	4.2	3.7	3.6	3.6	3.6	3.7	3.7
0 of 6	3.5	3.5	2.0	4.0	3.2	2.6	8.7	7.2	6.3

*HFZ = Healthy Fitness Zone



Appendix A

FITNESSGRAM®

Standards for Healthy Fitness Zone *

FEMALES

Age	One Mile min:sec	PACER # laps	Walk Test VO _{2max} ml/kg/min***	Percent Fat	Body Mass Index	Curl-Up # completed
10	12:30 — 9:30	15 — 41	—	32 — 17	23.5 — 16.6	12 — 26
11	12:00 — 9:00	15 — 41	—	32 — 17	24 — 16.9	15 — 29
12	12:00 — 9:00	23 — 41	—	32 — 17	24.5 — 16.9	18 — 32
13	11:30 — 9:00	23 — 51	37 — 45	32 — 17	24.5 — 17.5	18 — 32
14	11:00 — 8:30	23 — 51	36 — 44	32 — 17	25 — 17.5	18 — 32
15	10:30 — 8:00	23 — 51	35 — 43	32 — 17	25 — 17.5	18 — 35
16	10:00 — 8:00	32 — 61	35 — 43	32 — 17	25 — 17.5	18 — 35

Age	Trunk Lift inches	Push-Up # completed	Modified Pull-Up # completed	Pull-Up # completed	Flexed-Arm Hang seconds	Back-Saver Sit & Reach ** inches	Shoulder Stretch
10	9 — 12	7 — 15	4 — 13	1 — 2	4 — 10	9	Passing = Touching the fingertips together behind the back.
11	9 — 12	7 — 15	4 — 13	1 — 2	6 — 12	10	
12	9 — 12	7 — 15	4 — 13	1 — 2	7 — 12	10	
13	9 — 12	7 — 15	4 — 13	1 — 2	8 — 12	10	
14	9 — 12	7 — 15	4 — 13	1 — 2	8 — 12	10	
15	9 — 12	7 — 15	4 — 13	1 — 2	8 — 12	12	
16	9 — 12	7 — 15	4 — 13	1 — 2	8 — 12	12	

MALES

Age	One Mile min:sec	PACER # laps	Walk Test VO _{2max} ml/kg/min***	Percent Fat	Body Mass Index	Curl-Up # completed
10	11:30 — 9:00	23 — 61	—	25 — 10	21 — 15.3	12 — 24
11	11:00 — 8:30	23 — 72	—	25 — 10	21 — 15.8	15 — 28
12	10:30 — 8:00	32 — 72	—	25 — 10	22 — 16.0	18 — 36
13	10:00 — 7:30	41 — 72	42 — 52	25 — 10	23 — 16.6	21 — 40
14	9:30 — 7:00	41 — 83	42 — 52	25 — 10	24.5 — 17.5	24 — 45
15	9:00 — 7:00	51 — 94	42 — 52	25 — 10	25 — 18.1	24 — 47
16	8:30 — 7:00	61 — 94	42 — 52	25 — 10	26.5 — 18.5	24 — 47

Age	Trunk Lift inches	Push-Up # completed	Modified Pull-Up # completed	Pull-Up # completed	Flexed-Arm Hang seconds	Back-Saver Sit & Reach ** inches	Shoulder Stretch
10	9 — 12	7 — 20	5 — 15	1 — 2	4 — 10	8	Passing = Touching the fingertips together behind the back.
11	9 — 12	8 — 20	6 — 17	1 — 3	6 — 13	8	
12	9 — 12	10 — 20	7 — 20	1 — 3	6 — 13	8	
13	9 — 12	12 — 25	8 — 22	1 — 4	12 — 17	8	
14	9 — 12	14 — 30	9 — 25	2 — 5	15 — 20	8	
15	9 — 12	16 — 35	10 — 27	3 — 7	15 — 20	8	
16	9 — 12	18 — 35	12 — 30	5 — 8	15 — 20	8	

* Number on left is lower end of HFZ; number on right is upper end of HFZ.

** Test scored Pass/Fail; must reach this distance to pass.

*** VO_{2max} reflects the maximum rate that oxygen can be taken into and utilized by the body during exercise.